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ID

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| 09/182,102 | 10/27/98 | HAAF T | A-65680-2/RF |

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| EXAMINER | |
|---|---|
| BRUSCA,J | |
| ART UNIT | PAPER NUMBER |
| 1631 | 15 |

DATE MAILED: 06/05/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

| Application No. | Applicant(s) |
|---|---|
| 09/182,102 | Haaf et al. |
| **Examiner** | **Group Art Unit** |
| John S. Brusca | 1631 |

☒ Responsive to communication(s) filed on *3/30/00*

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**

☒ Claim(s) *18, 19, 21, and 47-52* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *18, 19, 21, and 47-52* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

**Application Papers**

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

*--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---*

## DETAILED ACTION

1. The group and or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1631.

### *Continued Prosecution Application*

2. The request filed on 3/30/00 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/182102 is acceptable and a CPA has been established. An action on the CPA follows.

3. The after final Amendment received 12/6/99 has not been entered as the entry of the amendment was not requested by the Applicants at the time of filing the request for a CPA. The Amendment received 3/30/00 has been entered.

### *Claim Objections*

4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 22-27 have been renumbered 47-52.

***Claim Rejections - 35 USC § 112***

5. The rejection of claim 21 under 35 U.S.C. § 112, first paragraph for lack of enablement in the Office Action mailed 8/31/99 has been extended to all pending claims as discussed below.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 18, 19, 21, and 47-52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In *In re Wands* (8 USPQ2d 1400 (CAFC 1988)) the CAFC considered the issue of enablement in molecular biology. The CAFC summarized eight factors to be considered in a determination of "undue experimentation". These factors include: (a) the quantity of experimentation necessary; (b) the amount of direction or guidance presented; (c) the presence or absence of working examples; (d) the nature of the invention; (e) the state of the prior art; (f) the relative skill of those in the art; (g) the predictability of the art; and (h) the breadth of the claims.

In considering the factors for the instant claims:

a) In order to practice the claimed invention one of skill in the art must identify a Rad51 mutation that is associated with a disease because the only asserted utility for the claimed

invention is as a diagnostic for disease, as discussed in the specification on pages 9 and 15-16, and there is no other well recognized utility for the claimed invention. For the reasons discussed below, there would be an unpredictable amount of experimentation required to use the claimed invention.

b)No specific guidance is presented in the specification to identify a mutant Rad51 gene that is associated with a disease. The specification speculates on page 16, lines 3-6, that mutations in Rad51 genes might cause disease.

c) The specification does not present a working example of identifying a mutant Rad51 gene that is associated with a disease.

d) The invention is drawn to a method of identifying a Rad51 mutation that is associated with a disease

e) Vispe et al. was published before the filing date of the immediate parent Application No. 09/007020, and was received in the STIC library on 3/5/98. Vispe et al. reviews the prior art concerning Rad51, and states that Rad51 is known to bind p53, BRCA1, and BRCA2 proteins. Vispe et al. does not show a disease caused by a mutation of Rad51. Vispe et al. states in the conclusion on page 590:

"Considering the role of Rad51 in recombination and potentially in cell proliferation, and its association with both BRCA1 and BRCA2, it is possible that mutations in either gene could increase genomic instability and/or disturb the cell cycle, leading to tumorigenesis. To support this hypothesis it would be interesting to look for RAD51 mutations in tumor cells."

Therefore, Vispe merely suggests that a screen to determine the possible existence of Rad51 mutations might be useful to study tumorigenesis.

f) The skill of those in the art of molecular biology is high.

g) The prior art does not predict that Rad51 mutations cause disease.

h) The claims are broad in that they are drawn to a method of identifying Rad51 mutations that are associated with disease although there is no guidance in the specification or the prior art as to what mutations of Rad51 meet the claimed limitations.

The skilled practitioner would first turn to the specification for guidance in performing the claimed method of identifying Rad51 mutations associated with disease. However, the specification does not disclose mutations of Rad51 that meet the claimed limitations, and so said practitioner would not be able to determine success or failure of the method. As such, the skilled practitioner would turn to the prior art for such guidance. However, the prior art does not teach the claimed method or Rad51 mutations that are associated with disease. Finally, said practitioner would turn to trial and error experimentation to perform the claimed method without guidance from the specification or the prior art. Such represents undue experimentation.

7. The Declaration under 37 CFR 1.132 filed 3/30/00 is insufficient to overcome the rejection of claims 18, 19, 21, and 47-52 under 35 U.S.C. § 112, first paragraph detailed above because:

The Declaration filed by Dr. Gurucharan Reddy, one of the inventors of the instant application, does not provide evidence that mutations of Rad51 are associated with disease. In

section 7 of the Declaration, Dr. Reddy states that it is his opinion that mutations of Rad51 would be correlated with a disease state. Because factual evidence has not been presented regarding these statements, the opinion expressed in the Declaration is unpersuasive.

Regarding the weight to be given to opinion evidence in a Rule 132 Declaration, the MPEP states in section 716.01(c):

OPINION EVIDENCE

Although factual evidence is preferable to opinion testimony, such testimony is entitled to consideration and some weight so long as the opinion is not on the ultimate legal conclusion at issue. While an opinion as to a legal conclusion is not entitled to any weight, the underlying basis for the opinion may be persuasive. In re Chilowsky, 306 F.2d 908, 134 USPQ 515 (CCPA 1962) (expert opinion that an application meets the requirements of 35 U.S.C. 112 is not entitled to any weight; however, facts supporting a basis for deciding that the specification complies with 35 U.S.C. 112 are entitled to some weight); In re Lindell, 385 F.2d 453, 155 USPQ 521 (CCPA 1967) (Although an affiant's or declarant's opinion on the ultimate legal issue is not evidence in the case, "some weight ought to be given to a persuasively supported statement of one skilled in the art on what was not obvious to him." 385 F.2d at 456, 155 USPQ at 524 (emphasis in original)). In assessing the probative value of an expert opinion, the examiner must consider the nature of the matter sought to be established, the strength of any opposing evidence, the interest of the expert in the outcome of the case, and the presence or absence of factual support for the expert's opinion. Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986). See also In re Oelrich, 579 F.2d 86, 198 USPQ 210 (CCPA 1978) (factually based expert

opinions on the level of ordinary skill in the art were sufficient to rebut the prima facie case of obviousness); Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989) (statement in publication dismissing the "preliminary identification of a human b-NGF-like molecule" in the prior art, even if considered to be an expert opinion, was inadequate to overcome the rejection based on that prior art because there was no factual evidence supporting the statement); In re Carroll, 601 F.2d 1184, 202 USPQ 571 (CCPA 1979) (expert opinion on what the prior art taught, supported by documentary evidence and formulated prior to the making of the claimed invention, received considerable deference); In re Beattie, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992) (declarations of seven persons skilled in the art offering opinion evidence praising the merits of the claimed invention were found to have little value because of a lack of factual support); Ex parte George, 21 USPQ2d 1058 (Bd. Pat. App. & Inter. 1991) (conclusory statements that results were "unexpected," unsupported by objective factual evidence, were considered but were not found to be of substantial evidentiary value).

Although an affidavit or declaration which states only conclusions may have some probative value, such an affidavit or declaration may have little weight when considered in light of all the evidence of record in the application. In re Brandstadter, 484 F.2d 1395, 179 USPQ 286 (CCPA 1973).

An affidavit of an applicant as to the advantages of his claimed invention, while less persuasive than that of a disinterested person, cannot be disregarded for this reason alone. Ex parte Keyes, 214 USPQ 579 (Bd. App. 1982); In re McKenna, 203 F.2d 717, 97 USPQ 348 (CCPA 1953).

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of enablement fails to outweigh the evidence of lack of enablement for claims 18, 19, 21, and 47-52.

8. The rejection of claim 21 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention in the Office Action mailed 8/31/99 is withdrawn in view of the Amendment received 3/30/00.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 51 and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claims 51 and 52 recite the limitation "the mutation in Rad51". There is insufficient antecedent basis for this limitation in the claim. The rejection would be overcome by amending claims 51 and 52 to recite "the mutant Rad51 gene."

## *Claim Rejections - 35 USC § 102*

12. The rejection of claim 19 under 35 U.S.C. 102(b) as being anticipated by Ogawa et al. in the Office Action mailed 8/31/99 is withdrawn in view of the Amendment received 3/30/00.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa et al.

The claim is drawn to a method of comparing mammalian Rad51 gene sequences for differences.

Ogawa et al. shows in figures 7 and 8 a comparison of human and murine Rad51 protein sequences determined by a comparison of Rad51 gene sequences. Ogawa et al. shows in figures 7 and 8 numerous differences between the compared Rad51 genes.

Therefore, Ogawa et al. anticipates the claimed invention.

***Conclusion***

15. Certain papers related to this application may be submitted to Art Unit 1631 by facsimile transmission. The FAX number is (703) 305-7939. In such cases please call the Examiner at (703) 308-4231 at the time of transmission to expedite delivery of the fax. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6 (d)). NOTE: If applicant *does* submit a paper by FAX, the original copy should be retained by applicant or applicant's

representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Brusca, Ph.D. whose telephone number is (703) 308-4231. The examiner can normally be reached on Monday through Friday from 9 AM to 5 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached at (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

John S. Brusca, Ph.D.

Primary Examiner